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## Synthesis and characterization of orotic acid loaded chitosan inclusion complex (Article)

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### Abstract

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The current study aims to improve drug release properties of orotic acid loaded with chitosan inclusion complex (OA/CS). The OA/CS inclusion complex was synthesized using the freeze-drying technique. The characterization of inclusion OA/CS was carried out using fourier transform infrared spectroscopy (FTIR), X-ray diffractometry (XRD), differential scanning calorimetry (DSC), zeta sizer, and transmission electron microscopy (TEM). Furthermore, the size of OA/CS ranged between 58 nm and 200 nm, and the zeta potential was 30 mV. Thus, this study indicates that OA/CS has a promising future to develop a carrier for drug delivery systems further. © 2020, International Journal of Drug Delivery Technology. All rights reserved.

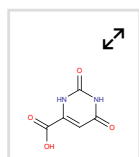
### SciVal Topic Prominence ⓘ

Topic: Cetyl Palmitate | Tristearin | Polydispersity

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## Chemistry database information ⓘ

### Substances



### Author keywords

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Usman, M.S. , Hussein, M.Z. ,  
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EMTREE drug terms:

chitosan orotic acid orotic acid loaded chitosan inclusion complex unclassified drug

EMTREE medical terms:

Article differential scanning calorimetry drug analysis drug delivery system drug release drug screening drug stability drug synthesis Fourier transform infrared spectroscopy freeze drying particle size physical chemistry transmission electron microscopy X ray diffraction X ray powder diffraction zeta potential

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## Chemicals and CAS Registry Numbers:

chitosan, 9012-76-4; orotic acid, 58915-47-2, 65-86-1

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